



SEQUENCE LISTING

B
(1) GENERAL INFORMATION:

(i) APPLICANT:

- (A) NAME: Geron Corporation
- (B) STREET: 230 Constitution Drive
- (C) CITY: Menlo Park
- (D) STATE: California
- (E) POSTAL CODE (ZIP): 94025
- (F) TELEPHONE: (415) 473-7700
- (G) TELEFAX: (415) 473-7750
- (H) TELEX:

(i) APPLICANT:

- (A) NAME: Kim, Nam Woo
- (B) STREET: 541 Winterberry Way
- (C) CITY: San Jose
- (D) STATE: California
- (E) POSTAL CODE (ZIP): 95129
- (F) TELEPHONE:
- (G) TELEFAX:
- (H) TELEX:

(i) APPLICANT:

- (A) NAME: Wu, Fred
- (B) STREET: 1143 Greene Terrace
- (C) CITY: Davis
- (D) STATE: California
- (E) POSTAL CODE (ZIP): 94616
- (F) TELEPHONE:
- (G) TELEFAX:
- (H) TELEX:

(i) APPLICANT:

- (A) NAME: Kealey, James T.
- (B) STREET: 9 Mono Lane
- (C) CITY: San Anselmo
- (D) STATE: California
- (E) POSTAL CODE (ZIP): 94960
- (F) TELEPHONE:
- (G) TELEFAX:
- (H) TELEX:

(i) APPLICANT:

- (A) NAME: Pruzan, Ronald
- (B) STREET: 852 Matadero Avenue
- (C) CITY: Palo Alto
- (D) STATE: California
- (E) POSTAL CODE (ZIP): 94306
- (F) TELEPHONE:
- (G) TELEFAX:
- (H) TELEX:

(i) APPLICANT:

- (A) NAME: Weinrich, Scott L.

(B) STREET: 1830 Brewster Avenue
(C) CITY: Redwood City
(D) STATE: California
(E) POSTAL CODE (ZIP): 94062
(F) TELEPHONE:
(G) TELEFAX:
(H) TELEX:

(ii) TITLE OF INVENTION: Methods for Detecting and Inhibiting the RNA Component of Telomerase

(iii) NUMBER OF SEQUENCES: 29

(iv) CORRESPONDENCE ADDRESS:

(A) ADDRESSEE: Townsend and Townsend and Crew LLP
(B) STREET: Two Embarcadero Center, Eighth Floor
(C) CITY: San Francisco
(D) STATE: California
(E) COUNTRY: USA
(F) ZIP: 94111-3834

(v) COMPUTER READABLE FORM:

(A) MEDIUM TYPE: Floppy disk
(B) COMPUTER: IBM PC compatible
(C) OPERATING SYSTEM: PC-DOS/MS-DOS
(D) SOFTWARE: PatentIn Release #1.0, Version #1.30

(vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER: WO PCT/US97/Not yet assigned
(B) FILING DATE: Not yet assigned
(C) CLASSIFICATION:

(vii) PRIOR APPLICATION DATA:

(A) APPLICATION NUMBER: US 08/770,564
(B) FILING DATE: 20-DEC-1996

(viii) PRIOR APPLICATION DATA:

(A) APPLICATION NUMBER: US 08/770,565
(B) FILING DATE: 20-DEC-1996

(ix) ATTORNEY/AGENT INFORMATION:

(A) NAME: Storella, John R.
(B) REGISTRATION NUMBER: 32,944
(C) REFERENCE/DOCKET NUMBER: 15389-27PC

(x) TELECOMMUNICATION INFORMATION:

(A) TELEPHONE: (415) 576-0200
(B) TELEFAX: (415) 576-0300

(2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 981 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: -
(B) LOCATION: 1..981
(D) OTHER INFORMATION: /note= "PstI fragment of
SauIIIA1-HindIII fragment of clone 28-1
containing the sequence of the RNA
component of human telomerase (hTR)"

(ix) FEATURE:

(A) NAME/KEY: misc_RNA
(B) LOCATION: 266..716
(D) OTHER INFORMATION: /product= "RNA component of human
telomerase (hTR)"

(ix) FEATURE:

(A) NAME/KEY: misc_feature
(B) LOCATION: 311..320
(D) OTHER INFORMATION: /note= "template region of hTR"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

CTGCAGAGGA TAGAAAAAAG GCCCTCTGAT ACCTCAAGTT AGTTTCACCT TTAAAGAAGG	60
TCGGAAGTAA AGACGCAAAG CCTTTCCCGG ACGTGCAGAA GGGCAACGTC CTTCCATG	120
GCCGGAAATG GAACTTAAT TTCCCGTTCC CCCCAACCAG CCCGCCGAG AGAGTGACTC	180
TCACGAGAGC CGCGAGAGTC AGCTTGGCCA ATCCGTGCGG TCGGCGGCCG CTCCCTTAT	240
AAGCCGACTC GCCCGGCAGC GCACCGGGTT GCGGAGGGTG GGCCTGGGAG GGGTGGTGGC	300
CATTTTTGT CTAACCCTAA CTGAGAAGGG CGTAGGCGCC GTGCTTTGC TCCCCGCGCG	360
CTGTTTCT CGCTGACTTT CAGCGGGCGG AAAAGCCTCG GCCTGCCGCC TTCCACCGTT	420
CATTCTAGAG CAAACAAAAA ATGTCAGCTG CTGGCCCGTT CGCCCTCCC GGGGACCTGC	480
GGCGGGTCGC CTGCCAGCC CCCGAACCCC GCCTGGAGGC CGCGGTGGC CGGGGGCTTC	540
TCCGGAGGCA CCCACTGCCA CCGCGAAGAG TTGGGCTCTG TCAGCCGCCG GTCTCTCGGG	600
GGCGAGGGCG AGGTTCAAGGC CTTCAAGGCC GCAGGAAGAG GAACGGAGCG AGTCCCCGCG	660
CGCGGCGCGA TTCCCTGAGC TGTGGGACGT GCACCCAGGA CTCGGCTCAC ACATGCAGTT	720
CGCTTCTCG TTGGTGGGG GAACGCCGAT CGTGCAGCATC CCTCACCCCT CGCCGGCAGT	780
GGGGGTTGT GAACCCCCAA ACCTGACTGA CTGGGCCAGT GTGCTGAAA TTGGCAGGAG	840
ACGTGAAGGC ACCTCCAAAG TCGGCCAAAA TGAATGGCA GTGAGCCGGG GTTGCCTGGA	900
GCCGTTCTG CGTGGGTTCT CCCGTCTTCC GCTTTGTT GCCTTTATG GTTGTATTAC	960

AACTTAGTTC CTGCTCTGCA G

981

(2) INFORMATION FOR SEQ ID NO:2:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 30 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(ix) FEATURE:

- (A) NAME/KEY: -
(B) LOCATION: 1..30
(D) OTHER INFORMATION: /note= "oligo 14"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

CGTCCTCTT CCTGCGGCCT GAAACGGTGA

30

(2) INFORMATION FOR SEQ ID NO:3:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(ix) FEATURE:

- (A) NAME/KEY: -
(B) LOCATION: 1..20
(D) OTHER INFORMATION: /note= "oligo 14ab"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

CGTCCTCTT CCTGCGGCCT

20

(2) INFORMATION FOR SEQ ID NO:4:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(ix) FEATURE:
(A) NAME/KEY: -
(B) LOCATION: 1..12
(D) OTHER INFORMATION: /note= "oligo 14d"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

CGTTCCTCTT CC

12

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 30 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(ix) FEATURE:
(A) NAME/KEY: -
(B) LOCATION: 1..30
(D) OTHER INFORMATION: /note= "oligo 16"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

CTGACAGAGC CCAACTCTTC GCGGTGGCAG

30

(2) INFORMATION FOR SEQ ID NO:6:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(ix) FEATURE:
(A) NAME/KEY: -
(B) LOCATION: 1..20
(D) OTHER INFORMATION: /note= "oligo 16ab"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

CTGACAGAGC CCAACTCTTC

20

(2) INFORMATION FOR SEQ ID NO:7:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 20 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(ix) FEATURE:

- (A) NAME/KEY: -
- (B) LOCATION: 1..20
- (D) OTHER INFORMATION: /note= "oligo 16bc"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

CCAACTCTTC GCGGTGGCAG

20

(2) INFORMATION FOR SEQ ID NO:8:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 30 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(ix) FEATURE:

- (A) NAME/KEY: -
- (B) LOCATION: 1..30
- (D) OTHER INFORMATION: /note= "oligo 21"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

GCTCTAGAAT GAACGGTGGA AGGCAGG

30

(2) INFORMATION FOR SEQ ID NO:9:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 19 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(ix) FEATURE:

- (A) NAME/KEY: -

- (B) LOCATION: 1..19
- (D) OTHER INFORMATION: /note= "oligo 21ab"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

GCTCTAGAAT GAACGGTGG

19

(2) INFORMATION FOR SEQ ID NO:10:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 15 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(ix) FEATURE:

- (A) NAME/KEY: -
- (B) LOCATION: 1..15
- (D) OTHER INFORMATION: /note= "oligo 21ab3"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

GCTCTAGAAT GAACG

15

(2) INFORMATION FOR SEQ ID NO:11:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 11 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(ix) FEATURE:

- (A) NAME/KEY: -
- (B) LOCATION: 1..11
- (D) OTHER INFORMATION: /note= "oligo 21ab2"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

GCTCTAGAAT G

11

(2) INFORMATION FOR SEQ ID NO:12:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 7 base pairs

- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(ix) FEATURE:

- (A) NAME/KEY: -
- (B) LOCATION: 1..7
- (D) OTHER INFORMATION: /note= "oligo 21ab1"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

GCTCTAG

7

(2) INFORMATION FOR SEQ ID NO:13:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 20 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(ix) FEATURE:

- (A) NAME/KEY: -
- (B) LOCATION: 1..20
- (D) OTHER INFORMATION: /note= "oligo 20/21"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

CATTTTTTGT TTGCTCTAGA

20

(2) INFORMATION FOR SEQ ID NO:14:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 17 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(ix) FEATURE:

- (A) NAME/KEY: -
- (B) LOCATION: 1..17
- (D) OTHER INFORMATION: /note= "polynucleotide RP2"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

CGGGGCCAGCA GCTGACA

17

(2) INFORMATION FOR SEQ ID NO:15:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 26 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(ix) FEATURE:

- (A) NAME/KEY: -
- (B) LOCATION: 1..26
- (D) OTHER INFORMATION: /note= "28S rRNA forward primer"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

GCTAAATACC GGCACGAGAC CGATAG

26

(2) INFORMATION FOR SEQ ID NO:16:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 20 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(ix) FEATURE:

- (A) NAME/KEY: -
- (B) LOCATION: 1..20
- (D) OTHER INFORMATION: /note= "28S rRNA forward primer"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

GCTAAATACC GGCACGAGAC

20

(2) INFORMATION FOR SEQ ID NO:17:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 18 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(2) INFORMATION FOR SEQ ID NO:20:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 26 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(ix) FEATURE:

- (A) NAME/KEY: -
(B) LOCATION: 1..26
(D) OTHER INFORMATION: /note= "28S rRNA reverse primer"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

GGTTTCACGC CCTCTTGAAC TCTCTC

26

(2) INFORMATION FOR SEQ ID NO:21:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 21 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(ix) FEATURE:

- (A) NAME/KEY: -
(B) LOCATION: 1..21
(D) OTHER INFORMATION: /note= "28S rRNA reverse primer"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

GTTTCACGCC CTCTTGAACT C

21

(2) INFORMATION FOR SEQ ID NO:22:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 19 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(ix) FEATURE:

- (A) NAME/KEY: -
- (B) LOCATION: 1..19
- (D) OTHER INFORMATION: /note= "28S rRNA reverse primer"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

GTTCACGCC CTCTTGAAC

19

(2) INFORMATION FOR SEQ ID NO:23:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 19 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(ix) FEATURE:

- (A) NAME/KEY: -
- (B) LOCATION: 1..19
- (D) OTHER INFORMATION: /note= "28S rRNA reverse primer"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

CTAGTTTCAC GCCCTCTTG

19

(2) INFORMATION FOR SEQ ID NO:24:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 19 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(ix) FEATURE:

- (A) NAME/KEY: -
- (B) LOCATION: 1..19
- (D) OTHER INFORMATION: /note= "28S rRNA reverse primer"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

CTGGTTTCAC GCCCTCTTG

19

(2) INFORMATION FOR SEQ ID NO:25:

- (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 26 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(ix) FEATURE:

- (A) NAME/KEY: -
- (B) LOCATION: 1..26
- (D) OTHER INFORMATION: /note= "hTR forward primer"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

GAAGGGCGTA GGCGCCGTGC TTTTGC

26

(2) INFORMATION FOR SEQ ID NO:26:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 27 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(ix) FEATURE:

- (A) NAME/KEY: -
- (B) LOCATION: 1..27
- (D) OTHER INFORMATION: /note= "hTR reverse primer"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

GTTTGCTCTA GAATGAAACGG TGGAAGG

27

(2) INFORMATION FOR SEQ ID NO:27:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 20 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(ix) FEATURE:

- (A) NAME/KEY: -
- (B) LOCATION: 1..20
- (D) OTHER INFORMATION: /note= "oligo 14bc"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

CCTGCGGCCT GAAACGGTGA

20

(2) INFORMATION FOR SEQ ID NO:28:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 10 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: -
- (B) LOCATION: 1..10
- (D) OTHER INFORMATION: /note= "template region of hTR"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

CTAACCCCTAA

10

(2) INFORMATION FOR SEQ ID NO:29:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 451 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: -
- (B) LOCATION: 1..451
- (D) OTHER INFORMATION: /note= "RNA component of human telomerase (hTR)"

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 46..55
- (D) OTHER INFORMATION: /note= "template region of hTR"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

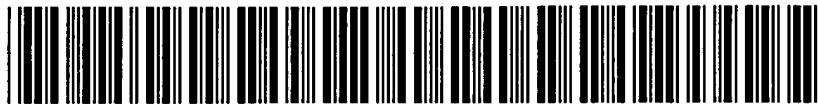
GGGTTGCGGA GGGTGGGCCT GGGAGGGGTG GTGGCCATTT TTTGTCTAAC CCTAACTGAG

60

AAGGGCGTAG GCGCCGTGCT TTTGCTCCCC GCGCGCTGTT TTTCTCGCTG ACTTCAGCG

120

GGCGGAAAG CCTCGGCCTG CCGCCTCCA CCGTTCATTC TAGAGCAAAC AAAAAATGTC 180
AGCTGCTGGC CCGTTCGCCC CTCCCGGGGA CCTGCGGCGG GTCGCCTGCC CAGCCCCGA 240
ACCCCGCCTG GAGGCCGCGG TCGGCCCGGG GCTTCTCCGG AGGCACCCAC TGCCACCGCG 300
AAGAGTTGGG CTCTGTCAGC CGCGGGTCTC TCAGGGGGCGA GGGCGAGGTT CAGGCCTTTC 360
AGGCCGCAGG AAGAGGAACG GAGCGAGTCC CCGCGCGCGG CGCGATTCCC TGAGCTGTGG 420
GACGTGCACC CAGGACTCGG CTCACACATG C 451



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Remarks:

Order of re-scan issued on